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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,344	09/28/2004	Masafumi Matsunaga	NOR-1218	5384
<div>7590 06/21/2007</div> <div>Kevin G Rooney Wood Herron & Evans 441 Vine Street 2700 Carew Tower Cincinnati, OH 45202</div> <div>EXAMINER TADDESSE, YEWEBDAR T</div> <div>ART UNIT PAPER NUMBER</div> <div>1734</div> <div>MAIL DATE DELIVERY MODE</div> <div>06/21/2007 PAPER</div>				

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,344	Applicant(s) MATSUNAGA ET AL.	
	Examiner Yewebdar T. Tadesse	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17-20, 23, 25 and 26 rejected under 35 U.S.C. 102(b) as being anticipated by Strecker (US 6,691,895).

As to claims 17 and 23, Strecker discloses (see Figs 1-2) a liquid dispensing apparatus comprising: two or more vessels (cylinders, 80, 82, 280, 282) configured to be filled with liquid; a flow passage (224, 238) configured and arranged to enable the liquid to flow between the two or more vessels (see Fig 2, the liquid coming out of each of the cylinders communicate within the flow passage disposed between the two vessels); a valve including a spray nozzle (dispensing tip 39, 239) for dispensing the liquid from the flow passage; a first pressurizing device (70,270) to apply a predetermined pressure to at least one vessel of the two or more vessels (80, 280); a second pressurizing device (72,272) configured to set a pressure of at least one remaining vessel at a lower level than the predetermined pressure of the at least one vessel (82, 282); and a flow rate restricting member (screws 50, 250, drive mechanism 60, 260 in communication with a controller 102) capable of regulating a flow rate of the liquid flowing between the two vessels in the flow passage when the first pressurizing

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device applies the predetermined pressure to the at least one vessel of the two or more vessels and the second pressurizing device sets the pressure of the at least one remaining vessel at the lower level than the predetermined pressure of the at least one vessel.

As to claim 18, Strecker discloses a flow rate-restricting member (screws 50,250) positioned inside of the flow passage.

As to claim 19, Strecker discloses a flow rate-restricting member (screws 50,250) positioned in the flow passage between each of the two or more vessels and the valve.

As to claim 20, Strecker discloses the pressurizing devices (70, 72, 270,272) intermittently apply a pressure to each vessel.

With respect to claim 25, in Strecker the flow-restricting member includes screws (raising and lowering the screw) correspond to the on/off valve having an orifice as described in applicants' Fig 3.

As to claim 26, Strecker discloses (see Fig 2) vessels that are syringes.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strecker (US 6,691,895) in view of Yanagita et al (US 6,540,104).

Strecker lacks teaching the pressurizing device or delivery mechanism using compressed gas to apply pressure to the plunger. However, it is well known in the art to use compressed gas for a delivery mechanism of a plunger or piston type as taught by Yanagita et al (see Fig 4 and columns 2-3, lines 67-68 and 1-4 respectively). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include pressurizing devices or other delivery mechanism using compressed gas to apply pressure to the plunger in Strecker as an alternative way of delivering mechanism of the liquid material and the selection of any of these known equivalents to compressed gas pressurizing means would be within the level of ordinary skill in the art.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strecker (US 6,691,895) in view of Hunter et al (US 6,672,519). Strecker et al lacks teaching a spray nozzle atomizing the liquid using a gas. However, a spray nozzle using a gas to

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atomize the liquid material is well known in the art; for instance – Hunter et al discloses (see Fig 4) a spray nozzle using a gas to atomize the liquid material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a spray nozzle using a gas to atomize the liquid in Strecker to form desired pattern of liquid material (see column 4, lines 41-52).

Response to Arguments

Applicants' arguments filed 04/06/2007 have been fully considered but they are not persuasive. Applicants argue that Strecker fails to disclose or suggest, "a flow passage constructed and arranged to enable the liquid to flow between the two or more vessels". Examiner respectfully disagrees because in Strecker the liquid flows in the passage (224, 238) provided between the two vessels (280, 282). Additionally, in Strecker the liquid is not prevented to flow in the section or passage (224,238), when the screw (250) is not completely lowered through the passage. Applicants also argue that Strecker fails to disclose the liquid originated from vessel (280) can somehow flow through the flow passage to vessel (282) or in reverse. This argument is not persuasive. The argument is not commensurate in scope with the claims. The claims are not limited to "liquid flows from one vessel to another vessel" as argued.

For at least the reason described above the examiner maintains the art rejections of Strecker alone and/or in combination with Yanagita and Hunter et al.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tucker Phillip can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



YTT